

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A computer system having a processor configured for component-based processing, said system comprising:
 - a component specification element that specifies components, wherein the components are reusable components;
 - a control flow specification element that specifies control flows;
 - a data flow specification element that specifies data flows;
 - a resource specification element that specifies resources; and
 - a quality of service specification derivation element, the quality of service specification derivation element having for output an application model in combination with a quality of service specification derived by implication from relations between the components, the control flows, the data flows and the resources;

wherein the quality of service specification derivation element tests the components and the relations between the components to derive the quality of service specification;

and wherein said quality of service specification is made available to a runtime engine for deployment as a runtime contract in a runtime processing environment.
2. (Original) A computer system as claimed in claim 1, further comprising a runtime engine for deploying said runtime contract.
3. (Original) A computer system as claimed in claim 1, wherein said runtime contract comprises a messaging requirement contract.
4. (Original) A computer system as claimed in claim 1, wherein said runtime contract comprises a transactionality requirement contract.
5. (Original) A computer system as claimed in claim 1, wherein said runtime contract comprises a security requirement contract.

6. (Original) A computer system as claimed in claim 1, wherein said runtime contract comprises a recoverability requirement contract.
7. (Original) A computer system as claimed in claim 1, wherein said runtime contract comprises a completion requirement contract.
8. (Original) A computer system as claimed in claim 7, wherein said runtime contract comprises a completion requirement contract specifying transactional behavior.
9. (Original) A computer system as claimed in claim 7, wherein said runtime contract comprises a completion requirement contract specifying compensation behavior.
10. (Original) A computer system as claimed in claim 1, wherein said runtime contract comprises at least one of a reliability, availability and serviceability requirement contract.
11. (Original) A computer system as claimed in claim 1, wherein said runtime contract comprises a quality of delivery requirement contract.
12. (Original) A computer system as claimed in claim 1, wherein said runtime contract comprises at least one of a priority requirement and a response goal requirement contract.
13. (Original) A computer system as claimed in claim 1, wherein said runtime contract comprises a performance requirement contract.
14. (Original) A computer system as claimed in claim 1, wherein said quality of service specification is stored in a repository.
15. (Original) A computer system as claimed in claim 1, wherein said quality of service specification is stored in a tagged markup language.

16. (Original) A computer system as claimed in claim 15, wherein said tagged markup language is XML.

17. (Original) A computer system as claimed in claim 1, wherein said quality of service specification is stored in a modeling language.

18. (Previously presented) A method for component-based processing, said method comprising the steps of:

specifying components, wherein the components are reusable components;

specifying control flows;

specifying data flows;

specifying resources; and

deriving a quality of service specification by implication from relations between the components, the control flows, the data flows and the resources;

wherein a quality of service specification derivation element is employed to test the components and the relations between the components to derive the quality of service specification;

and wherein said quality of service specification is made available to a runtime engine for deployment as a runtime contract in a runtime processing environment.

19. (Original) A method as claimed in claim 18, further comprising the step of deploying said runtime contract by a runtime engine.

20. (Original) A method as claimed in claim 18, wherein said runtime contract comprises a transactionality requirement contract.

21. (Original) A method as claimed in claim 18, wherein said runtime contract comprises a security requirement contract.

22. (Original) A method as claimed in claim 18, wherein said runtime contract comprises a recoverability requirement contract.
23. (Original) A method as claimed in claim 18, wherein said runtime contract comprises a completion requirement contract.
24. (Original) A method as claimed in claim 23, wherein said runtime contract comprises a completion requirement contract specifying transactional behavior.
25. (Original) A method as claimed in claim 23, wherein said runtime contract comprises a completion requirement contract specifying compensation behavior.
26. (Original) A method as claimed in claim 18, wherein said runtime contract comprises at least one of a reliability, availability and serviceability requirement contract.
27. (Original) A method as claimed in claim 18, wherein said runtime contract comprises a quality of delivery requirement contract.
28. (Original) A method as claimed in claim 18, wherein said runtime contract comprises at least one of a priority requirement and a response goal requirement contract.
29. (Original) A method as claimed in claim 18, wherein said runtime contract comprises a performance requirement contract.
30. (Original) A method as claimed in claim 18, wherein said quality of service specification is stored in a repository.
31. (Original) A method as claimed in claim 18, wherein said quality of service specification is stored in a tagged markup language.
32. (Original) A method as claimed in claim 31, wherein said tagged markup language is XML.

33. (Original) A method as claimed in claim 18, wherein said quality of service specification is stored in a modeling language.

34. (Previously presented) A computer program product comprising computer program code on a computer readable storage medium to, when loaded and executed on a computer, cause said computer to perform the steps of:

- specifying components, wherein the components are reusable components;

- specifying control flows;

- specifying data flows;

- specifying resources; and

- deriving a quality of service specification by implication from relations between the components, the control flows, the data flows and the resources;

- wherein a quality of service specification derivation element is employed to test the components and the relations between the components to derive the quality of service specification;

- and wherein said quality of service specification is made available to a runtime engine for deployment as a runtime contract in a runtime processing environment.

35. (Previously presented) The computer program product of claim 34 further comprising additional computer program code to, when loaded and executed on a computer, cause said computer to perform the step of:

- deploying said runtime contract using a runtime engine.

36. (Previously presented) The computer program product of claim 34, wherein said runtime contract comprises a transactionality requirement contract.

37. (Previously presented) The computer program product of claim 34, wherein said runtime contract comprises a security requirement contract.

38. (Previously presented) The computer program product of claim 34, wherein said runtime contract comprises a recoverability requirement contract.

39. (Previously presented) The computer program product of claim 34, wherein said runtime contract comprises a completion requirement contract.
40. (Previously presented) The computer program product of claim 39, wherein said completion requirement contract specifies transactional behavior.
41. (Previously presented) The computer program product of claim 39, wherein said completion requirement contract specifies compensation behavior.
42. (Previously presented) The computer program product of claim 34, wherein said runtime contract comprises at least one of a reliability, availability, and serviceability contract.
43. (Previously presented) The computer program product of claim 34, wherein said runtime contract comprises a quality of delivery requirement contract.
44. (Previously presented) The computer program product of claim 34, wherein said runtime contract comprises at least one of a priority requirement and a response goal requirement contract.
45. (Previously presented) The computer program product of claim 34, wherein said runtime contract comprises a performance requirement contract.
46. (Previously presented) The computer program product of claim 34, wherein said quality of service specification is stored in a repository.
47. (Previously presented) The computer program product of claim 34, wherein said quality of service specification is stored in a tagged markup language.
48. (Previously presented) The computer program product of claim 47, wherein said tagged markup language is XML.

49. (Previously presented) The computer program product of claim 34, wherein said quality of service specification is stored in a modeling language.